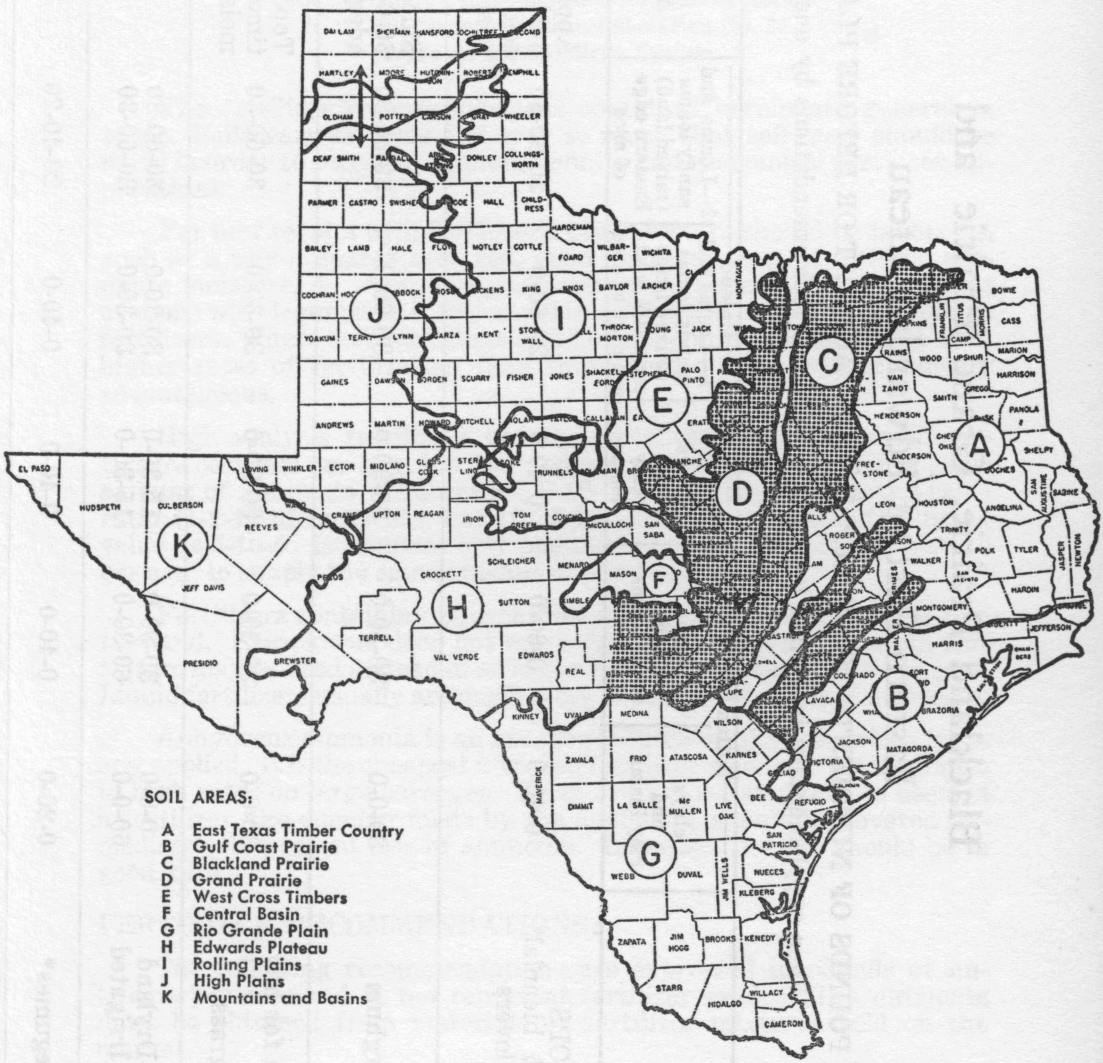
FERTILIZER RECOMMENDATIONS

for the Blackland Prairie, Grand Prairie and Eastern Part of Edwards Plateau



Adapted from Texas Agricultural Experiment Station Bulletin 431, by W. T. Carter.

TEXAS AGRICULTURAL EXTENSION SERVICE
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The fertilizer recommendations contained herein are general in scope. Soils vary in fields and area so much that soil tests should be made in order to recommend more definite and economical fertilizer applications.

For best results with fertilizers, other factors should be favorable, such as a well-prepared seed bed, good stand, absence of disease, adequate moisture, aeration and good cultural practices. Good cropping systems with legumes in rotation aid in a favorable response of crops to fertilizers. Where soil conditions and moisture are very favorable even higher rates of fertilization than those shown may be economically advantageous.

High-analysis fertilizers usually are cheaper. Low-analysis fertilizers cost less per bag, but the cost per acre is greater for the same amount of nutrients. The grades, 5-10-5 and 10-20-10, have the same ratio (1-2-1) of nutrients, but 10-20-10 has twice as much fertilizing value as 5-10-5. It requires only one-half as many pounds of 10-20-10 per acre to supply the same amount of plant nutrients.

Fertilizers containing phosphorus should be drilled or plowed into the land. Phosphorus does not move freely into the soil. Liquid fertilizers may be used instead of solid fertilizers at the same rate per acre. Liquid fertilizers usually are much more expensive per unit of nutrients.

Anhydrous ammonia is an excellent source of nitrogen when properly applied. It is the cheapest nitrogen fertilizer when used at moderate to high rates on large acreages. When anhydrous ammonia is used as a fertilizer, the opening made by the applicator should be covered immediately to prevent loss of ammonia. Likewise, the soil should be in good tilth.

FERTILIZER RECOMMENDATIONS:

The following recommendations are expressed in pounds of nutrients per acre and do not represent fertilizer grades. The nutrients must be obtained from materials or fertilizer mixtures sold on the market.

For example, a recommendation calling for 30-60-30, which is a 1-2-1 ratio, can be obtained by applying 600 pounds of 5-10-5 or 250 pounds of 12-24-12 or 300 pounds of 10-20-10. Again, if a recommendation calls for 15-60-0, this may be obtained by applying about 400 pounds of a 4-16-0 or 125 pounds of 11-48-0.

Row Crops: Fertilizer usually is applied at the time of planting or just before. Fertilizers are more efficiently used by most crops when applied in a band 2 to 3 inches to the side and 2 to 3 inches below the seed.

If equipment for applying fertilizers in bands while planting or cultivating is not available, apply the fertilizer in the water furrow and bed on it when the land is prepared for planting. Avoid putting the seed too close to the fertilizer as germination may be impaired.

If large quantities of nitrogen fertilizer are to be applied, part of the nitrogen should be drilled into the soil with the phosphorus and potash and the remainder applied 35 to 45 days later as a side or topdressing.

Small Grains: Fertilizers for small grains may be broadcast, drilled in or plowed in. Fertilizers containing nitrogen and potash should not be allowed to touch the seed of wheat but are not likely to be harmful to oats.

Phosphorus, potash and part of the nitrogen should be applied at or before seeding. The rest of the nitrogen, if heavy rates are being used, should be applied in the spring before plants begin to joint.

Pastures: For establishing improved pastures, fertilizer should be applied in bands when possible. Otherwise, it should be broadcast, drilled or plowed in. For maintenance of grass pasture topdress with 30-0-0 as needed. Repeat basic fertilizer treatment annually as suggested or according to a soil test.

Fruit Trees: Fertilizer for fruit trees may be applied over the entire area covered by the orchard when the trees are mature. In nonbearing orchards, the fertilizer should be applied over the area covered by the spread of the limbs. Keep fertilizer 1 foot away from tree trunks. Cultivate fertilizer applications into the soil.

Recommendations for fertilizers in this circular are those found best by experiments, tests and practical experience in the field. They range from the calcareous (limy) river valley clays to the sands of the uplands. If your farm contains both clays and loams, there will be two recommendations for your land.

When crops follow legumes turned under, the amount of fertilizer to be applied at planting may be reduced. Side or topdress with the amount of fertilizer suggested.

The letters NR mean that the crop is not recommended for this class of soils.

Cooperative Extension Work in Agriculture and Home Economics, The Texas A. & M. College System and United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, 1914, as amended, and June 30, 1914.

8M—11-57, Revised.

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POUNDS OF NUTRIENTS TO BE APPLIED PER ACRE AT OR BEFORE PLANTING

When supplementary irrigation is available, increase recommendations by one-half

	Bottomland		Upland			
	clays and clay loams	loams and sandy loams	Clays and clay loams	1—Loams and sandy loams (mixed land) central & western part of area	2—Loams and sandy loams (mixed land) Eastern edge of area	Additional Treatment
FIELD CROPS Alfalfa & biennial* sweetclovers	0-40-0	0-60-0	0-40-0	20-60-0	20-80-80	Apply 0-40-0 in fall annually to maintain. On acid soils, lime according to soil test
Corn Grain sorghum	30-0-0	30-30-0	30-30-0	30-60-0	30-60-30	Sidedress in 35 days with 30-0-0 if soil moisture is adequate
Sorghum for hay Sudan Johnsongrass	30-0-0	30-30-0	30-30-0	30-30-0	30-60-30	Topdress with 30-0-0 each time grazed or cut if soil moisture is adequate
Cotton—Dryland Irrigated	0-0-0 60-0-0	30-30-0 60-30-0	15-30-0 15-30-0	30-30-0 30-30-0	30-60-30 30-60-30	
Annual legumes*	0-20-0	0-40-0	0-40-0	0-40-0	20-40-20	
Oats and other small grain for grain and grazing**	0-0-0	0-40-0	0-40-0	0-40-0	20-40-20	Topdress with 30-0-0 in late February
Pastures, grasses only Grasses and legumes	30-30-0	30-30-0	30-30-0	30-60-0	30-60-30	Topdress with 30-0-0 each time grazed down if soil moisture is adequate. Apply lime according to soil test
Pasture grasses and legumes	0-30-0	0-30-0	0-30-0	30-60-0	30-60-60	Repeat for maintenance annually
Peanuts	NR	NR	NR	NR	20-40-20	
TRUCK CROPS Cabbage	20-40-0	40-80-0	40-80-0	40-80-0	40-80-80	Sidedress with 60-0-0 when heads begin to form
Carrots	20-40-0	40-80-0	40-80-0	40-80-0	40-80-40	
Onions	20-40-0	20-80-0	40-80-0	40-80-0	40-80-40	
Tomatoes and peppers	40-40-0	40-80-0	40-80-0	40-80-0	80-80-40	½ at setting out, remainder at first bloom
General garden	40-40-0	40-80-0	40-80-0	40-80-0	40-80-40	Sidedress in 40 days with 40-0-0 if soil moisture is adequate

***If history indicates low level of production on land, apply 15 pounds nitrogen in addition to that listed for legumes. Due to variability in growing conditions from north to south, soil test should be made for all crops.**

****No nitrogen should be used in the fall north of the line running east and west through Waco unless grazing is planned due to tendency for increasing growth so as to cause winter killing. South of this line 30 pounds of nitrogen may be used to increase grazing.**